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**TO:** Company Announcements Office  
ASX Limited

**FROM:** Company Secretary

**DATE:** 15 November 2010

**SUBJECT:** **Address to Australian Institute of Energy**

Please find attached the presentation by David Knox to the Australian Institute of Energy on Monday 15 November 2010.

**David Lim**  
Company Secretary



Thank you Tony [Vassallo, AIE president.] Ladies and gentlemen.

It's a pleasure to address the Australian Institute of Energy, an organisation that has for some time provided a platform for discussion on the critical issues facing the energy sector.

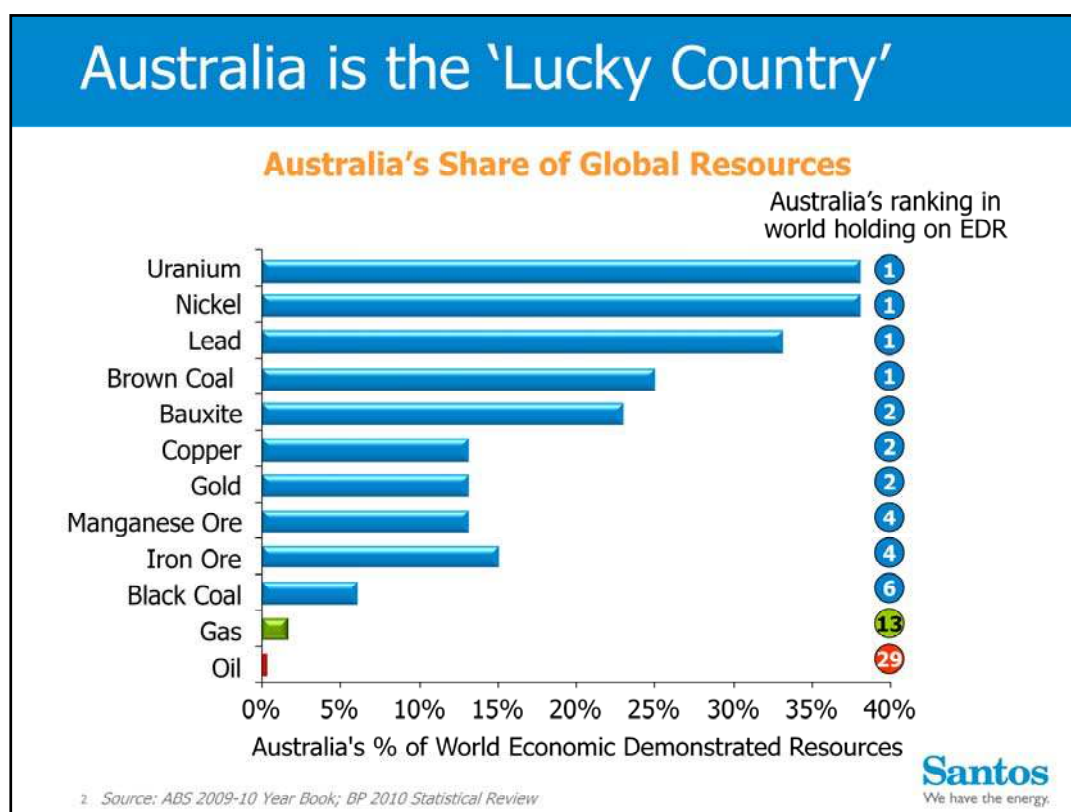
This morning certainly provides such an opportunity with our eminent international speakers, Ambassador Richard Jones and Fereidun Fesharaki.

I know we all look forward to hearing from them.

It's significant that Dick will this morning make the first public presentation on the International Energy Agency's 2010 World Energy Outlook.

This morning I'd like to provide an Australian energy producer's perspective on the significant role this country plays in providing energy to the world – and the scope for that role to be further enhanced by our abundant, available and affordable resources of natural gas.

I'll talk about the greater role natural gas can play in providing a cleaner energy mix, both at home and through LNG exports to the growing economies of Asia.



Australia has long played a significant role in providing the resources on which so many industrialised economies rely.

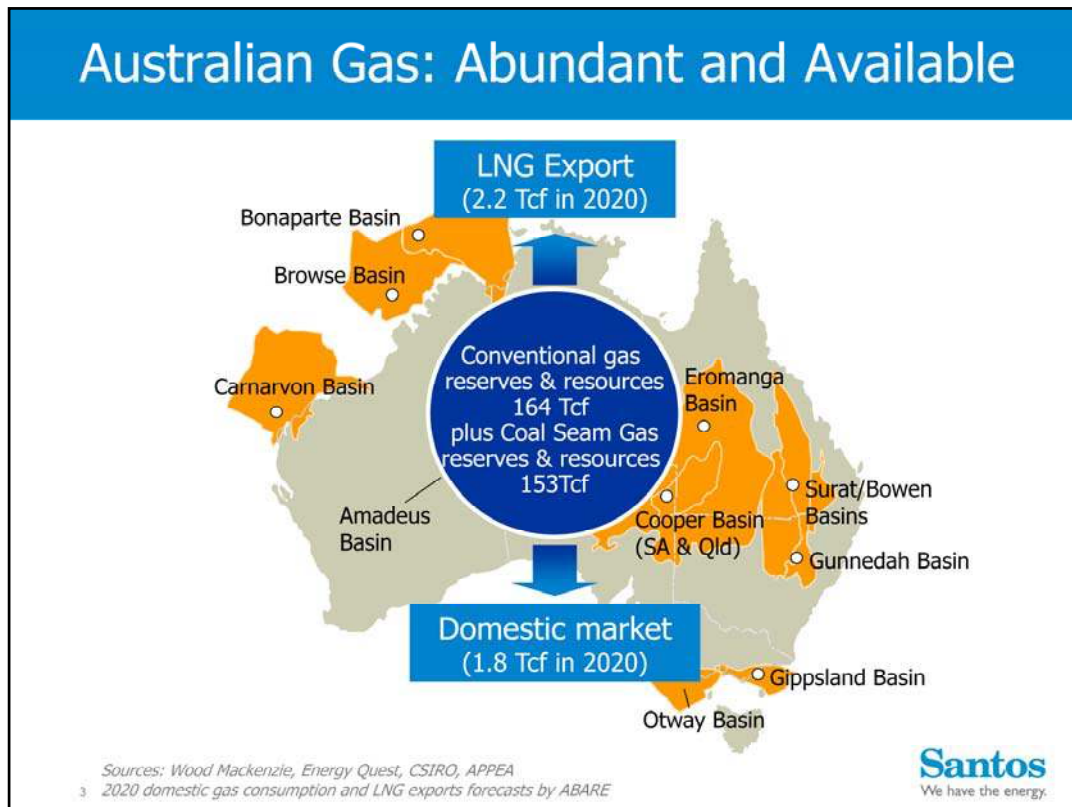
In the energy business, we are a middle-ranked power in oil and gas, and we have a dominant position in two other common fuels – coal and uranium.

But it's not just in energy where Australia is a "lucky country."

Australia holds the world's largest resources in a range of key commodities, and a leadership position in yet more. Our production of most of these resources is bound for Asia.

Our geographic proximity, political stability, abundant resources and track record of reliable delivery put us in an unrivalled position of underpinning Asia's economic development.

In natural gas, that role is set for significant expansion. The North West Shelf, together with Darwin LNG, already make Australia one of the world's major LNG exporters – but the significant number of projects planned over the next decade could see Australia grow to rival Qatar as the world's largest LNG producer. More on that later.



Australia's abundance of natural gas reserves and resources means we have ample opportunity to supply both domestic and export channels.

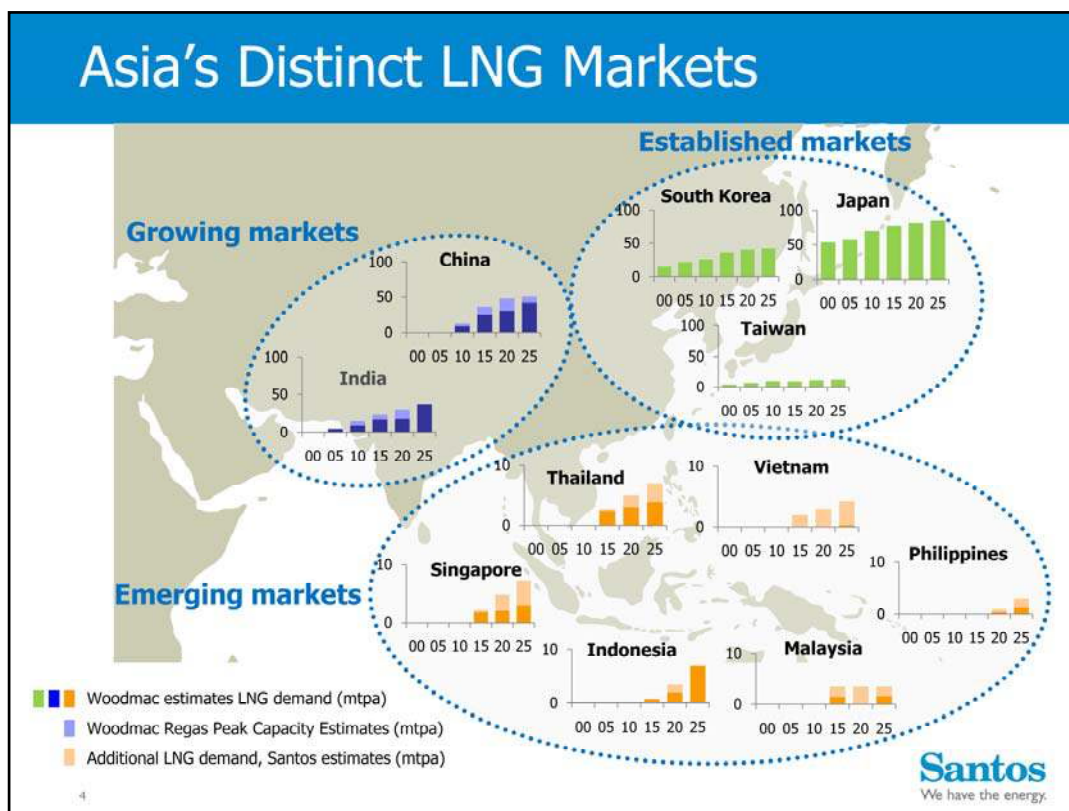
Faced with two distinct markets to supply, Australia does not have to make a choice. In other words, it's an "and" not an "or."

ABARE forecasts that in 2020 Australia will produce 4 trillion cubic feet of gas – split roughly between LNG for export and gas for the domestic market.

Even if LNG exports grow more dramatically than ABARE forecasts, with reserves and resources exceeding 300 trillion cubic feet, we have enough gas to serve Australia's needs for a very long time.

Indeed, the economic benefits of access to these global markets will bring forward investments that will help reduce our carbon emissions and ensure the continued development of gas reserves at home.

Of course, such assertions require confidence that the economic lever of strong Asian energy demand will continue. I believe that confidence is well-placed.



Between now and 2035 Asia is expected to account for around half of global population growth and two thirds of growth in primary energy consumption.

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The Asian LNG marketplace can now be seen in three distinct demand groups.

The first group is the established LNG markets of Japan, South Korea and Taiwan.

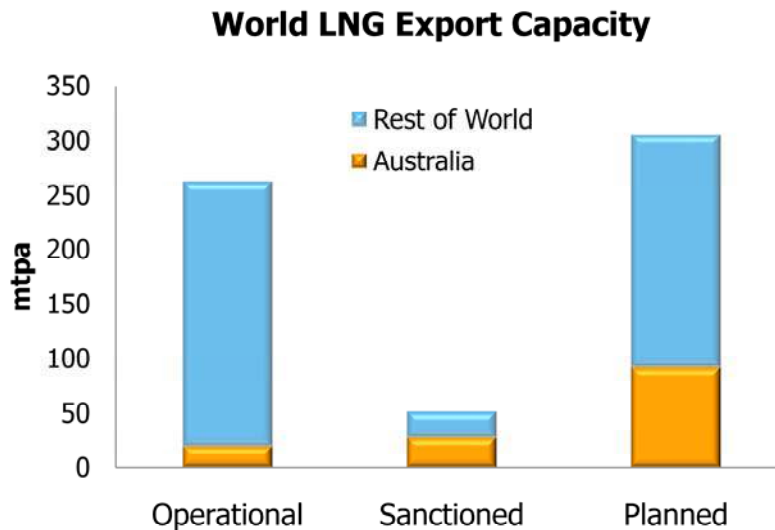
These countries are seeking security of supply and diversification by fuel type. They have effectively locked-in LNG demand, growing at steady incremental rates of between 1% and 3% per year.

The second group is the growing mega-markets of China and India, where gas demand is forecast to grow at 10% per annum, and which could soon be as significant as the current established markets.

The third group is emerging markets of South-East Asia: Singapore, Thailand, Malaysia, Indonesia, Vietnam and the Philippines.

This group includes some of Asia's bedrock LNG producers who are now facing growing domestic gas demand and declining reserves – and are looking to become importers themselves.

## Australian LNG Key to Future Supply



Source: Wood Mackenzie

**Santos**  
We have the energy.

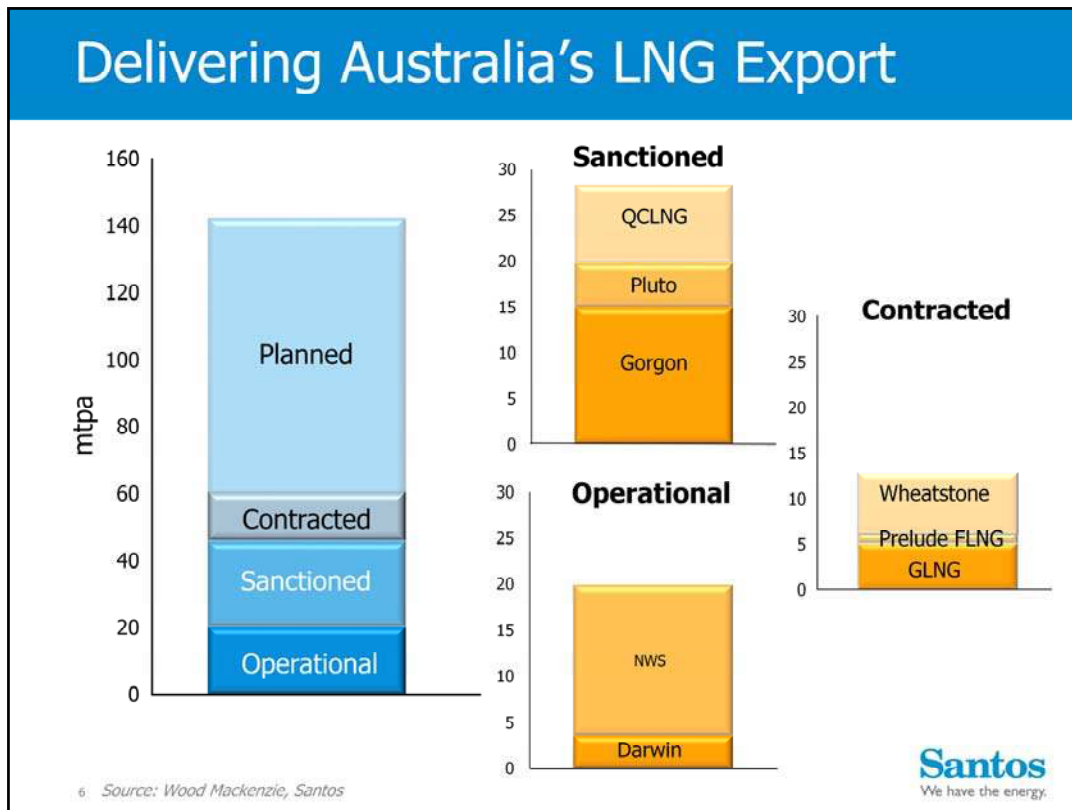
Australia's potential in the global LNG business is truly significant.

Right now we produce 20 million tonnes out of total world production of almost 250 million tonnes.

But a third of all additional projected production by 2025 – from projects sanctioned or proposed – could come from Australia.

Now not all these proposed projects will be developed – in Australia or elsewhere – but clearly Australia's significance in the global LNG marketplace is expanding.





It's worth looking closer at where growth in the Australian LNG sector will occur.

Santos, of course, is not alone in proposing significant additional investment.

As things stand at the moment, Australia has annual production of around 20 million tonnes from the operational plants of North West Shelf and Darwin.

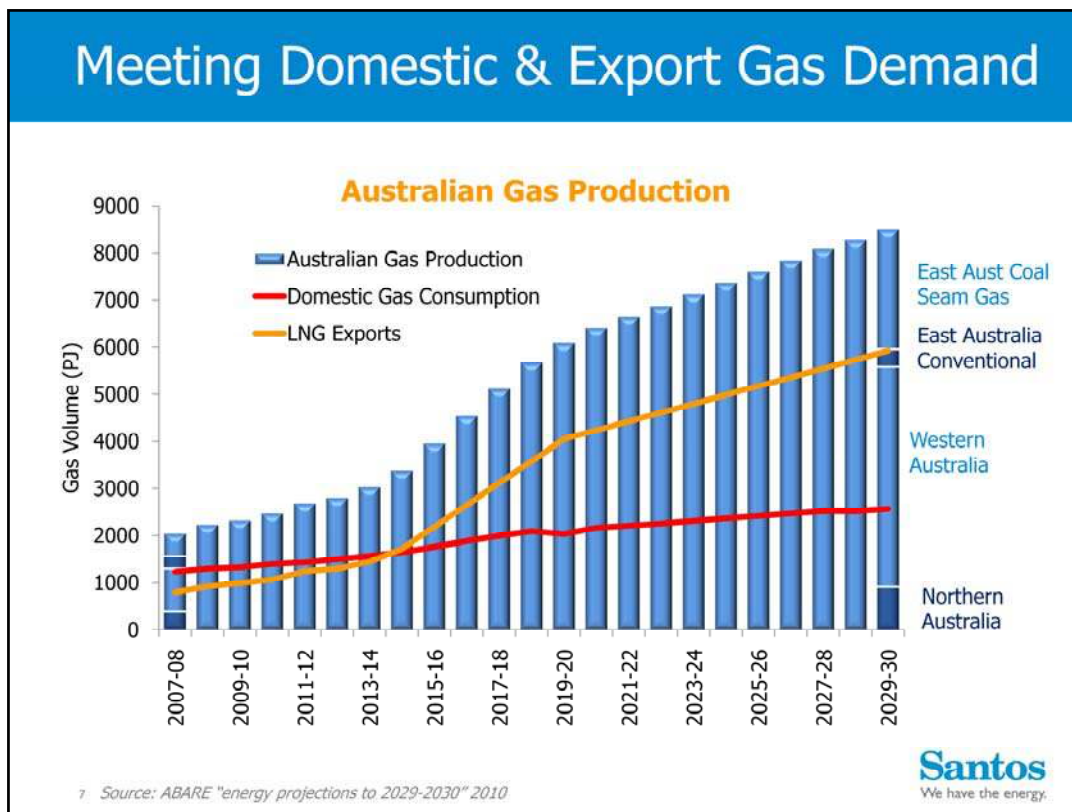
Another 28 million tonnes will be produced by sanctioned projects now under construction, Gorgon, Pluto and BG's Queensland Curtis Project.

Remarkably over 90 million tonnes is planned from various greenfield or expansion projects in various stages of consideration.

But it is worth highlighting that only three of these projects have binding offtake agreements in place.

This includes our own GLNG project – which has sold 5 million tonnes per annum of the total 7.2 mtpa from a two-train plant.

Growing Asian gas demand presents a great opportunity for those Australian suppliers who can bring these planned projects to reality.



Let's take a closer look at what this means for gas production in Australia.

The data behind this chart comes from ABARE.

This chart reflects the introduction of a carbon price from 2011-12. If this doesn't happen we can expect the red line, "domestic gas consumption," to shift to the right as the transition from coal to gas is delayed. But if we are serious about meeting emission reduction targets in a shorter time frame, it will then move up more aggressively post-2020.

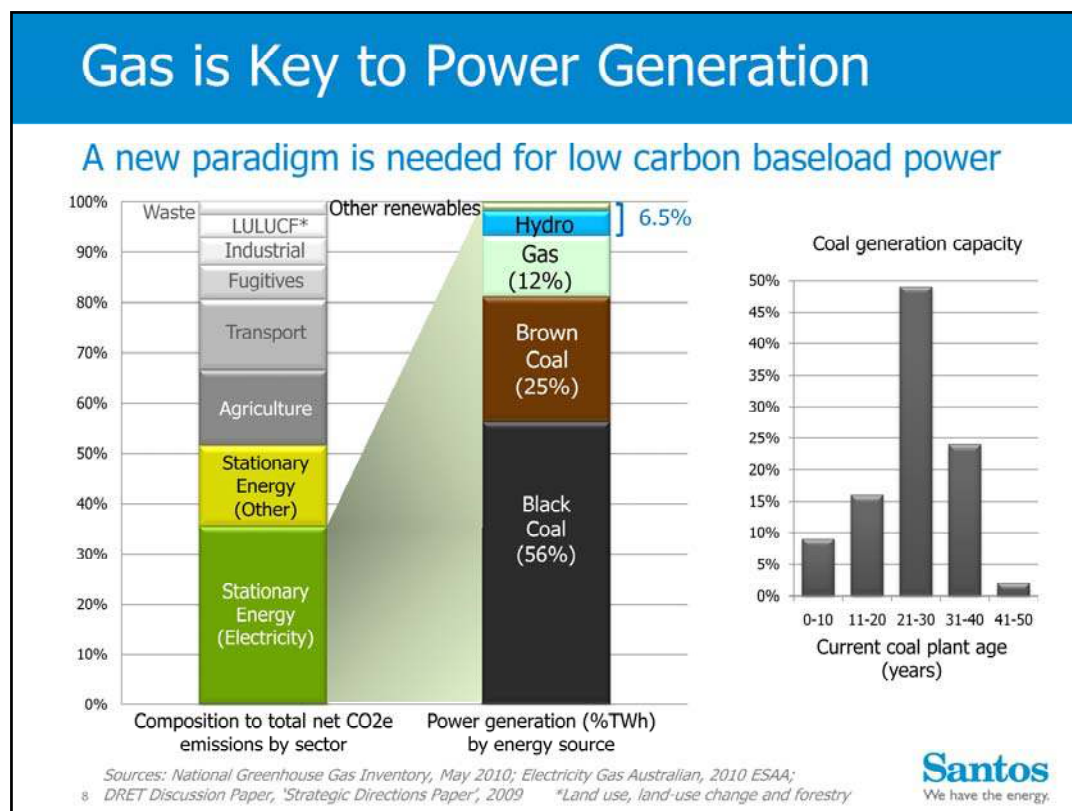
I will talk about how gas can help us achieve these targets in the next few slides.

ABARE's LNG Export modelling assumes that many of the currently planned LNG projects will be delivered. We also believe many of these projects will be built, but it may not be at the pace shown here.

It is important to note the growth in gas production across Australia is driven by growth in conventional gas reserves in the West and unconventional gas in Queensland and NSW.

Again the key message here is that Australia is blessed with significant gas resources capable of meeting both domestic and export demand over the next 20 years – and well beyond.





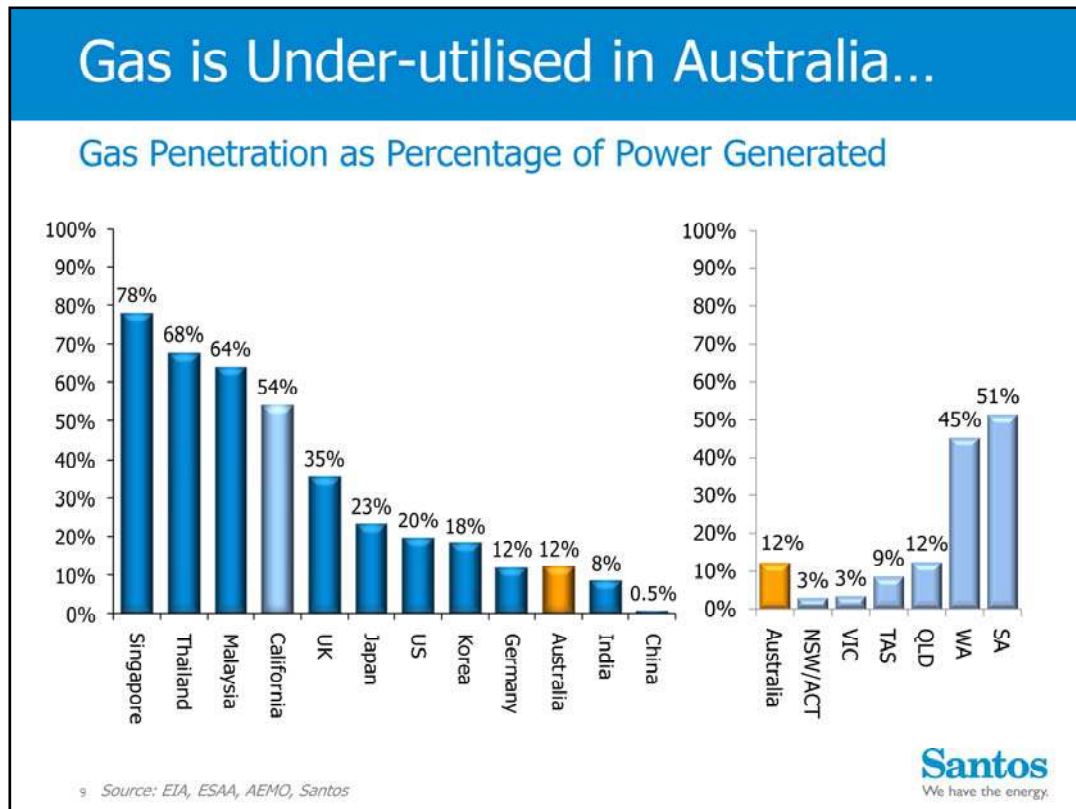
Increasing domestic gas production is important because gas is the fuel that is available and affordable now that can cut the carbon intensity of power generation.

If we are serious about action on climate change we must address greenhouse emissions from power generation.

This sector is the largest single contributor to Australia's carbon footprint, accounting for 35% of all the country's greenhouse gas emissions.

This is exacerbated by the fact that over 80% of our power comes from high carbon coal – with black coal dominating electricity production in New South Wales and Queensland, and Victoria heavily reliant on brown coal.

It is important to note that over 70% of Australia's coal plants are over 20 years old. With an average plant life of 40 years, we are rapidly approaching the point where critical decisions must be made on the future direction of Australian power generation.



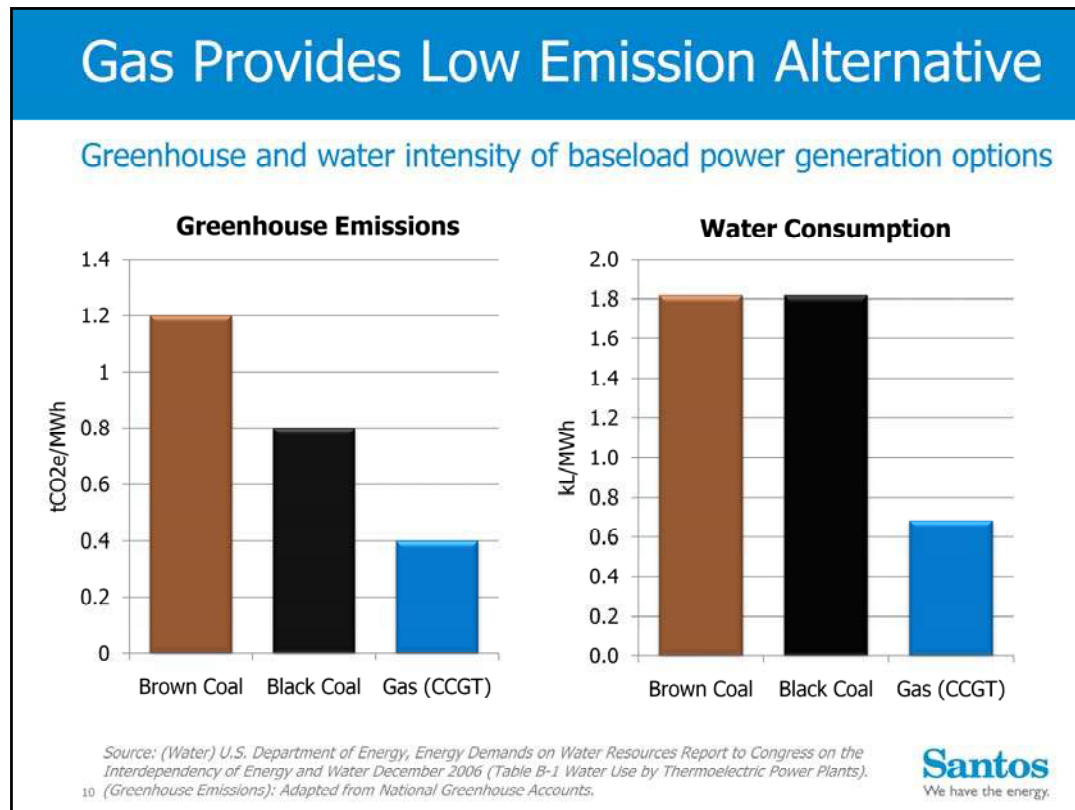
Increasing the penetration of gas is not uncharted territory. It is a proven solution.

Gas already plays a significant role in powering major economies. Singapore, Thailand, Malaysia and the state of California all get over half their power from natural gas. Over a third of Britain's power comes from gas.

Looking to Australia, it is no coincidence that South Australia – with the highest share of gas and renewable power – has the lowest emissions of any Australian mainland state.

It is also no coincidence that SA has the highest percentage of renewable power on the mainland, with 17% of the state's electricity generated by wind. Wind's contribution has grown in part due to the large role of gas-fired generators, which can be switched on and off quickly as the wind waxes and wanes.

The SA experience highlights our belief that natural gas and renewables are a perfect partnership in delivering a cleaner energy mix.



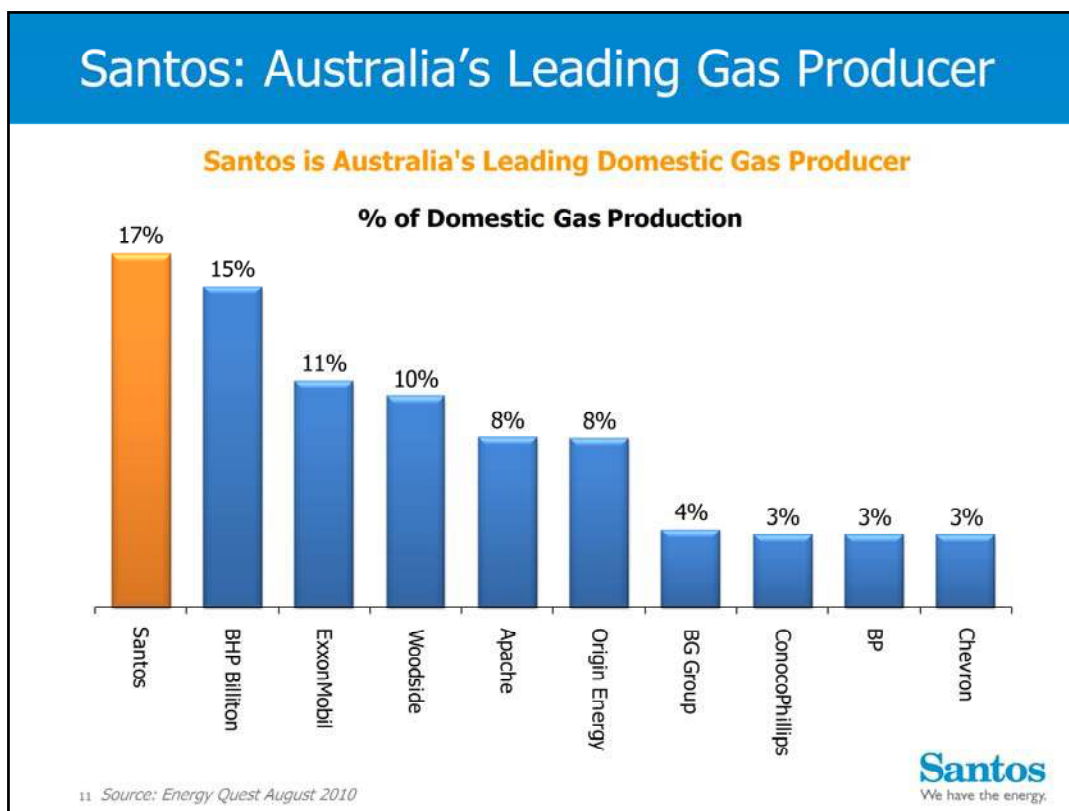
Carbon emissions are not the only environmental consideration in power generation. In Australia, in particular, water usage is a critical factor.

When making decisions about future baseload power water intensity must be considered.

As this chart shows, gas uses a fraction of the water required by all other baseload alternatives.

This chart also shows that new baseload gas power stations produce less than 0.4 tonnes of CO<sub>2</sub> per MWh. In comparison, existing brown coal stations emissions are about three times higher.

It is worth noting that 89% of Victoria's power comes from brown coal, and that's why the state has the least environmentally friendly power generation fleet in the country.



Of course as CEO of Santos, I am not without self-interest in this debate.

Santos is Australia's leading domestic gas producer and therefore, not surprisingly, we are pro-gas.

But I think it is self-evident that natural gas can play a major role in making meaningful progress on cutting carbon emissions.

Natural gas offers a solution that is achievable today and is affordable.

Santos will play a significant role in delivering this solution – both in Australia, and through LNG and our own domestic production in several countries – in Asia.

However, natural gas will not fulfil its full potential in cutting carbon emissions and providing energy security in the current policy environment.

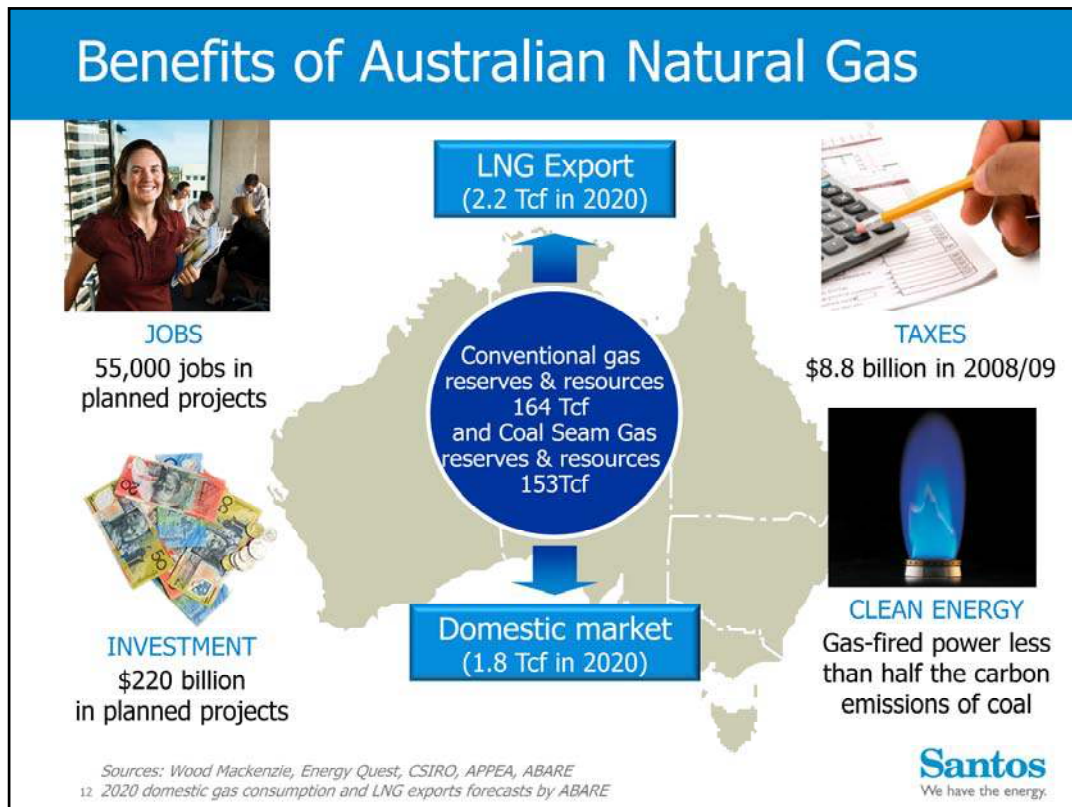
I believe that must change.

While people realise that coal is high-emissions and renewables are getting political and financial assistance .....

Gas – the only fuel that provides a baseload alternative to coal, using proven technology – is not getting any assistance at all.

I am not advocating for special handouts – just good sensible policy that recognises we need to put a price on carbon if we are going to address the problem of climate change.

But the development of sound carbon policy can not be taken for granted – and this month's US mid-term elections are another reminder that progress continues to be a casualty of political battle.



I have mapped out an encouraging outlook for the Australian natural gas sector, and one which promises significant benefits for Australia.

The rewards of getting it right are enormous: Australia will benefit from the jobs, investment and tax revenue the domestic and export gas industry will provide, while our Australian and Asian customers will benefit from the energy security and environmental benefits of natural gas.

Building a successful LNG export industry will also enable the investment required to develop greater capacity in the domestic gas market, a market we hope will continue to grow.

The benefits of getting it right are too great to lose focus.

While there will be a lot of “noise” along the way as the industry continues to develop, we must not lose sight of the big picture – as I know Dick and Fereidun will now highlight.

Thank you.

## Disclaimer & Important Notice

This presentation contains forward looking statements that are subject to risk factors associated with the oil and gas industry. It is believed that the expectations reflected in these statements are reasonable, but they may be affected by a range of variables which could cause actual results or trends to differ materially, including but not limited to: price fluctuations, actual demand, currency fluctuations, geotechnical factors, drilling and production results, gas commercialisation, development progress, operating results, engineering estimates, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial markets conditions in various countries, approvals and cost estimates.

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